

Mingyue Cheng 程明月

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Ph.D. · Associate Researcher

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Research Profile

My research centers on **LLM reasoning and AI agents**, with a focus on context-aware reasoning, autonomous interactive learning, continual adaptation, and agent evolution. Complex tasks in time-series intelligence and scientific intelligence provide the application settings for this research.

Core question: How can agents reliably solve problems through reasoning and interaction when information is incomplete, environments change, and feedback is costly?

- **Time-series intelligence — modeling the dynamic world.** Context awareness, heterogeneous time-series modeling, slow-thinking cognitive reasoning, and autonomous agent interaction for understanding complex dynamic systems.
- **Scientific intelligence — understanding the scientific world.** Scientific data, tools, literature and knowledge; tool-augmented scientific reasoning; and capability enhancement of scientific foundation models.
- **Autonomous learning and evolving agents.** Capability enhancement, agentic reinforcement learning, continual learning, memory, and the evolution of both models and agents through interaction.

Academic Appointments & Research Experience

Associate Researcher

Jun. 2023 – present

School of Computer Science and Technology, USTC, Hefei, China.

Affiliated with the State Key Laboratory of Cognitive Intelligence.

Research Intern

Jun. 2019 – Oct. 2019

Data Service Center, Platform and Content Group, Tencent, Shenzhen, China.

Engineering Intern

Jul. 2018 – Sep. 2018

Lab of Big Data, Core Technology R&D Platform, iFLYTEK, Hefei, China.

Education

Ph.D. in Computer Science and Technology

Sep. 2017 – Jun. 2023

University of Science and Technology of China, Hefei, China.

Supervisor: Prof. Qi Liu.

Bachelor of Management

Sep. 2013 – Jul. 2017

Hefei University of Technology, Hefei, China.

Major: Marketing Management.

Publications

Complete list of 72 records from the personal homepage, including demonstration papers, workshop contributions, and preprints. *Corresponding author; +equal contribution.

2026

- [1] **Mingyue Cheng**, Yucong Luo, Jie Ouyang, Qi Liu^{*}, Huijie Liu, Li Li, Shuo Yu, Bohou Zhang, Jiawei Cao, Jie Ma, Daoyu Wang, Enhong Chen. A Survey on Knowledge-Oriented Retrieval-Augmented Generation. *ACM Transactions on Information Systems (ACM TOIS)* Accepted. [Code]
- [2] **Mingyue Cheng**, Zhiding Liu, Xiaoyu Tao, Qi Liu^{*}, Jintao Zhang, Tingyue Pan, Shilong Zhang, Panjing He, Xiaohan Zhang, Daoyu Wang, Jiahao Wang, Enhong Chen. A Comprehensive Survey of Time Series Forecasting: Concepts, Challenges, and Future Directions. *IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE)* Accepted. [Code]
- [3] **Mingyue Cheng**, Qingyang Mao, Qi Liu^{*}, Yitong Zhou, Yupeng Li, Jiahao Wang, Jiaying Lin, Jiawei Cao, Enhong Chen. A Survey on Table Mining with Large Language Models: Challenges, Advancements and Prospects. *ACM Computing Surveys (ACM CSUR)* Accepted. [Code]
- [4] Tingyue Pan, **Mingyue Cheng**^{*}, Shilong Zhang, Zhiding Liu, Xiaoyu Tao, Yucong Luo, Jintao Zhang, Qi Liu. OneCast: Structured Decomposition and Modular Generation for Cross-Domain Time Series Forecasting. *ACM Transactions on Knowledge Discovery from Data (ACM TKDD)* Accepted.
- [5] **Mingyue Cheng**, Daoyu Wang, Qi Liu^{*}, Shuo Yu, Xiaoyu Tao, Yuqian Wang, Chengzhong Chu, Yu Duan, Mingkang Long, Enhong Chen. Mind2Report: A Cognitive Deep Research Agent for Expert-Level Commercial Report Synthesis. *ACM CIKM 2026* Accepted. [Code]
- [6] Yitong Zhou, Yucong Luo, **Mingyue Cheng**^{*}, Jiahao Wang, Daoyu Wang, Tingyue Pan, Jintao Zhang, Qi Liu, Enhong Chen. Time Series Forecasting as Reasoning: A Slow-Thinking Approach with Reinforced LLMs. *ACM CIKM 2026* Accepted. [Code]
- [7] Xiaohan Zhang, Tian Gao, **Mingyue Cheng**^{*}, Bokai Pan, Ze Guo, Yaguo Liu, Xiaoyu Tao, Qi Liu. AlphaCast: A Human Wisdom-LLM Intelligence Co-Reasoning Framework for Interactive Time Series Forecasting. *ACM CIKM 2026* Accepted. [Code]
- [8] **Mingyue Cheng**, Xiaoyu Tao, Huajian Zhang, Qi Liu^{*}, Enhong Chen. InstructTime++: Time Series Classification with Multimodal Language Modeling via Implicit Feature Enhancement. *ACM Transactions on Intelligent Systems and Technology (ACM TIST)* Accepted. [Code]
- [9] Yitong Zhou, **Mingyue Cheng**^{*}, Qingyang Mao, Yucong Luo, Qi Liu, Yupeng Li, Xiaohan Zhang, Deguang Liu, Xin Li, Enhong Chen. Benchmarking Multimodal LLMs on Recognition and Understanding over Chemical Tables. *KDD 2026* Accepted. [Code]
- [10] Xiaoyu Tao, **Mingyue Cheng**^{*}, Ze Guo, Shuo Yu, Yaguo Liu, Qi Liu, Shijin Wang. MemCast: Memory-Driven Time Series Forecasting with Experience-Conditioned Reasoning. *ICML 2026* Accepted.
- [11] **Mingyue Cheng**, Yaguo Liu, Daoyu Wang, Xiaoyu Tao, Qi Liu^{*}. CoGenCast: A Coupled Autoregressive-Flow Generative Framework for Time Series Forecasting. *ICML 2026* Accepted.
- [12] Xiaoyu Tao, Shilong Zhang, **Mingyue Cheng**^{*}, Daoyu Wang, Tingyue Pan, Bokai Pan, Changqing Zhang, Shijin Wang. From Values to Tokens: An LLM-Driven Framework for Context-aware Time Series Forecasting via Symbolic Discretization. *IJCAI 2026* Accepted.
- [13] Bohou Zhang, Xiaoyu Tao, **Mingyue Cheng**^{*}, Huijie Liu, Qi Liu. ScholarSum: Student-Teacher Abstractive Summarization via Knowledge Graph Reasoning and Reflective Refinement. *IJCAI 2026* Accepted.
- [14] Jiawei Cao, Jie Ouyang, **Mingyue Cheng**^{*}, Zhaomeng Zhou, Chunli Liu, Yupeng Li, Zirui Liu, Shijin Wang. Re³: Relevance & Recency Retrieval for Mitigating Temporal Hallucination. *ACL 2026* Accepted.
- [15] Huajian Zhang, **Mingyue Cheng**^{*}, Yucong Luo, Xiaoyu Tao. STaR: Towards Cognitive Table Reasoning via Slow-Thinking Large Language Models. *ACM WWW 2026*. [Code]
- [16] Zhiding Liu, Ben Chen, **Mingyue Cheng**^{*}, Enhong Chen, Li Li, Chenyi Lei^{*}, Wenwu Ou, Han Li and Kun Gai. Towards Context-aware Reasoning-enhanced Generative Searching in E-commerce. *ACM WWW 2026*.

- [17] Shuo Yu, **Mingyue Cheng**^{*}, Daoyu Wang, Qi Liu, Zirui Liu, Ze Guo, Xiaoyu Tao. MemWeaver: A Hierarchical Memory from Textual Interactive Behaviors for Personalized Generation. *ACM WWW 2026*.
- [18] **Mingyue Cheng**, Jiahao Wang, Daoyu Wang, Xiaoyu Tao, Qi Liu^{*}, Enhong Chen. Can Slow-Thinking LLMs Reason Over Time? Empirical Studies in Time Series Forecasting. *ACM WSDM 2026*: 99–110, Feb 2026. [Code]
- [19] **Mingyue Cheng**, Xiaoyu Tao, Zhiding Liu, Qi Liu^{*}, Hao Zhang, Rujiao Zhang and Enhong Chen. TimeMAE: Self-Supervised Representations of Time Series with Decoupled Masked Autoencoders. *ACM WSDM 2026*: 498–508, Feb 2026. [Code]
- [20] Chuang Jiang, **Mingyue Cheng**^{*}, Xiaoyu Tao, Qingyang Mao, Jie Ouyang and Qi Liu. TableMind: An Autonomous Programmatic Agent for Tool-Augmented Table Reasoning. *ACM WSDM 2026*: 260–270, Feb 2026. [Code]
- [21] Qingchuan Li, **Mingyue Cheng**^{*}, Zirui Liu, Daoyu Wang, Yuting Zeng, Tongxuan Liu. From Hypothesis to Premises: LLM-based Backward Logical Reasoning with Selective Symbolic Translation. *AAAI 2026*: 31671–31679, Mar 2026.
- [22] Yupeng Li, **Mingyue Cheng**^{*}, Yucong Luo, Yitong Zhou, Qingyang Mao, Shijin Wang. BLADE: A Behavior-Level Data Augmentation Framework with Dual Fusion Modeling for Multi-Behavior Sequential Recommendation. *AAAI 2026*: 15189–15197, Mar 2026.
- [23] Tingyue Pan, Jie Ouyang, **Mingyue Cheng**, Qingchuan Li, Zirui Liu, Daoyu Wang, Mingfan Pan, Shuo Yu, Qi Liu. PaperScout: An Autonomous Agent for Academic Paper Search with Process-Aware Sequence-Level Policy Optimization. *Findings of EMNLP 2026 Accepted*.
- [24] Xiaoyu Tao, **Mingyue Cheng**, Ze Guo, Bokai Pan, Qi Liu, Shijin Wang, Enhong Chen. CastClaw: A Human-in-the-Loop Autonomous Agent for Interactive Time Series Forecasting. *IEEE ICDM 2026 Demo Track Accepted*. [Code]
- [25] Daoyu Wang, **Mingyue Cheng**, Qingchuan Li, Shuo Yu, Jie Ouyang, Qi Liu, Enhong Chen. AgentWorld: A Data Factory for Training LLM Agents from Multi-Turn Interactions. *IEEE ICDM 2026 Demo Track Accepted*. [Code]
- [26] **Mingyue Cheng**, Shuo Yu, Daoyu Wang, Qingchuan Li, Xiaoyu Tao, Jie Ouyang, Yucong Luo, Yitong Zhou, Qi Liu^{*}, Enhong Chen. Agent-R1: A Unified and Modular Framework for Agentic Reinforcement Learning. *ACM CIKM 2026 Demo Track Accepted*.
- [27] **Mingyue Cheng**, Shuo Yu, Daoyu Wang, Qingchuan Li, Xiaoyu Tao, Qingyang Mao, Yitong Zhou, Qi Liu^{*}. TabClaw: An Interactive and Self-Evolving Agent for Spreadsheet Manipulation and Table Reasoning. *ACM CIKM 2026 Demo Track Accepted*.

2025

- [28] **Mingyue Cheng**, Jiqian Yang, Tingyue Pan, Qi Liu^{*}, Zhi Li. ConvTimeNet: A Deep Hierarchical Fully Convolutional Model for Multivariate Time Series Analysis. *ACM WWW 2025*, Sydney, 2025. — Included in *sktime*. [Code]
- [29] Xiaoyu Tao, Tingyue Pan, **Mingyue Cheng**^{*}, Yucong Luo, Qi Liu, Enhong Chen. Hierarchical Multimodal LLMs with Semantic Space Alignment for Enhanced Time Series Classification. (*ACM Transactions on Intelligent Systems and Technology (ACM TIST)*). [Code]
- [30] **Mingyue Cheng**, Yiheng Chen, Qi Liu^{*}, Zhiding Liu, Yucong Luo, Enhong Chen. InstrucTime: Advancing Time Series Classification with Multimodal Language Modeling. *ACM WSDM 2025 (Best of WSDM)*: 792–800, Hannover, 2025. [Code] [Poster]
- [31] **Mingyue Cheng**, Xiaoyu Tao, Qi Liu^{*}, Hao Zhang, Yiheng Chen, Defu Lian. Cross-Domain Pre-training with Language Models for Transferable Time Series Representations. *ACM WSDM 2025*: 175–183, Hannover, 2025. [Code] [Poster]
- [32] Daoyu Wang, **Mingyue Cheng**^{*}, Zhiding Liu, Qi Liu. TimeDART: A Diffusion Autoregressive Transformer for Self-supervised Time Series Representation. *ICML 2025*, Vancouver, PMLR 267, 2025. [Code]
- [33] Jie Ouyang, Tingyue Pan, **Mingyue Cheng**^{*}, Ruiran Yan, Yucong Luo, Jiaying Lin, Qi Liu. HoH: A Dynamic Benchmark for Evaluating the Impact of Outdated Information on RAG. *ACL 2025*: 6036–6063, Vienna, 2025. [Code]

- [34] **Mingyue Cheng**, Jintao Zhang, Zhiding Liu, Chunli Liu*. A Hybrid Multi-Factor Framework for Dynamic Intra-operative Hypotension Prediction. *IJCAI 2025*: 4923–4931, Montreal, 2025.
- [35] Jintao Zhang, **Mingyue Cheng***, Xiaoyu Tao, Zhiding Liu, Daoyu Wang. Conditional Denoising Meets Polynomial Modeling: A Flexible Decoupled Framework for Time Series Forecasting. *IJCAI 2025*: 6993–7001, Montreal, 2025. [Code]
- [36] Yitong Zhou, **Mingyue Cheng***, Qingyang Mao, Feiyang Xu, Xin Li. Enhancing Table Recognition with Vision LLMs: A Benchmark and Neighbor-Guided Toolchain Reasoner. *IJCAI 2025*: 2503–2511, Montreal, 2025. [Code]
- [37] Hao Zhang, **Mingyue Cheng***, Qi Liu, Zhiding Liu, Linbo Zhu, Yu Su. Towards Automatic Sampling of User Behaviors for Sequential Recommender Systems. *IJCAI 2025*: 3624–3632, Montreal, 2025. [Code]
- [38] Jiahao Wang, **Mingyue Cheng***, Qingyang Mao, Qi Liu, Feiyang Xu, Xin Li, Enhong Chen. TableTime: Reformulating Time Series Classification as Zero-Shot Table Understanding via LLMs. *ACM CIKM 2025*. [Code]
- [39] Shuo Yu, **Mingyue Cheng***, Jiqian Yang, Jie Ouyang, et al. Multi-Source Knowledge Pruning for Retrieval-Augmented Generation: A Benchmark and Empirical Study. *ACM CIKM 2025*.

2024

- [40] Jie Ouyang, Yucong Luo, **Mingyue Cheng***, Shuo Yu, Daoyu Wang, Qi Liu, Enhong Chen. Revisiting the Solution of Meta KDD Cup 2024: CRAG. (KDD Cup Workshop, **2nd Place in Task 2 & Task 3**). [Slides] [Poster]
- [41] **Mingyue Cheng**, Qi Liu*, Wenyu Zhang, Zhiding Liu, Hongke Zhao, Enhong Chen. A General Tail Item Representation Enhancement Framework for Sequential Recommender Systems. *Frontiers of Computer Science (FCS)*, 2024, 18(6): 1–12. [Code]
- [42] Rujiao Zhang, Hao Zhang, Yucong Luo, Zhiding Liu, **Mingyue Cheng**, Qi Liu, Enhong Chen*. Learning the Dynamics in Sequential Recommendation by Exploiting Real-time Information. *ACM CIKM 2024*: 4288–4292, Oct 2024.
- [43] Jie Wang, Fajie Yuan, **Mingyue Cheng**, et al. TransRec: Learning Transferable Recommendation from Mixture-of-Modality Feedback. *APWeb-WAIM 2024*: 193–208, Aug 2024.
- [44] Zhiding Liu, Jiqian Yang, **Mingyue Cheng***, Yucong Luo, Zhi Li. Generative Pretrained Hierarchical Transformer for Time Series Forecasting. *ACM SIGKDD 2024*: 2003–2013, Barcelona, 2024.
- [45] Yucong Luo, **Mingyue Cheng**, Hao Zhang, Junyu Lu, Enhong Chen*. Unlocking the Potential of Large Language Models for Explainable Recommendations. (DASFAA 2024). [Code]
- [46] Junzhe Jiang, Shang Qu, **Mingyue Cheng***, Qi Liu, et al. Reformulating Sequential Recommendation: Learning Dynamic User Interest with Content-enriched Language Modeling. (DASFAA 2024). [Code]
- [47] **Mingyue Cheng**, Hao Zhang, Qi Liu*, Fajie Yuan, Zhi Li, Zhenya Huang, Enhong Chen, Longfei Li, Jun Zhou. Empowering Sequential Recommender Systems from Mixture of Collaborative Signals and Semantic Relatedness. (DASFAA 2024). [Code]
- [48] Hao Zhang, **Mingyue Cheng***, Qi Liu, Yucong Luo, Rui Li, Enhong Chen. Learning Recommender Systems with Soft Target: A Decoupled Perspective. *DASFAA 2024*, LNCS 14852, Gifu, Japan, 2024. [Code]
- [49] **Mingyue Cheng**, Hao Zhang, Jiqian Yang, Qi Liu*, Li Li, Xin Huang, Liwei Song, Zhi Li, Zhenya Huang, Enhong Chen. Towards Personalized Evaluation of Large Language Models with An Anonymous Crowd-Sourcing Platform. (WWW 2024).
- [50] Junchen Fu, Fajie Yuan, Yu Song, Zheng Yuan, **Mingyue Cheng**, et al. Exploring Adapter-based Transfer Learning for Recommender Systems. *ACM WSDM 2024*: 208–217, Mar 2024. [Code]

2023 and earlier

- [51] Zhiding Liu, **Mingyue Cheng**, Zhi Li, Zhenya Huang, Qi Liu, Yanhu Xie, Enhong Chen. Adaptive Normalization for Non-stationary Time Series Forecasting: A Temporal Slice Perspective. *NeurIPS 2023*: 36, New Orleans, 2023. [Code]
- [52] Jie Geng, Chunli Liu*, Xuemei Wei, **Mingyue Cheng**, Kun Yuan, Yang Li, Yezheng Liu. Product Recommendation Method Based on User Repurchase Behavior. *Journal of Computer Research and Development*, 2023, 60(8): 1795–1807. (In Chinese).
- [53] **Mingyue Cheng**, Qi Liu*, Zhiding Liu, Zhi Li, Yucong Luo, Enhong Chen. FormerTime: Hierarchical Multi-scale Representation for Multivariate Time Series Classification. *ACM WWW 2023*: 1437–1445, Austin, 2023. [Code]
- [54] Wenqiang He, **Mingyue Cheng**, Qi Liu*, Zhi Li. ShapeWordNet: An Interpretable Shapelet Neural Network for Physiological Signal Classification. *DASFAA 2023*: 353–369, Tianjin, 2023.
- [55] **Mingyue Cheng**, Zhiding Liu*, Qi Liu*, Shenyang Ge, Enhong Chen. Towards Automatic Designing of Deep Hybrid Network Architecture for Sequential Recommendation. *ACM WWW 2022*: 1923–1932. [Code]
- [56] Zhiding Liu, **Mingyue Cheng**, Zhi Li, Qi Liu, Enhong Chen*. One Person, One Model — Learning Compound Router for Sequential Recommendation. *IEEE ICDM 2022*. [Code]
- [57] Junzhe Jiang, **Mingyue Cheng**, Qi Liu*, Zhi Li, Enhong Chen. Nested Named Entity Recognition from Medical Texts: A Multi-task Learning Approach. *CAAI CICA 2022*: 248–259.
- [58] Runlong Yu, Qi Liu*, Yuyang Ye, **Mingyue Cheng**, Enhong Chen, Jianhui Ma. Collaborative List-and-Pairwise Filtering from Implicit Feedback. *IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE)*, 2022, 34(6): 2667–2680.
- [59] Kai Zhang, Qi Liu*, Zhenya Huang, **Mingyue Cheng**, Kun Zhang, Mengdi Zhang, Wei Wu, Enhong Chen. Graph Adaptive Semantic Transfer for Cross-domain Sentiment Classification. *ACM SIGIR 2022*: 1566–1576.
- [60] **Mingyue Cheng**, Fajie Yuan*, Qi Liu*, Xin Xin, Enhong Chen. Learning Transferrable User Representations with Sequential Behaviors via Contrastive Pre-training. *IEEE ICDM 2021*: 51–60.
- [61] **Mingyue Cheng**, Fajie Yuan*, Qi Liu*, Shenyang Ge, Zhi Li, Runlong Yu, Defu Lian, Senchao Yuan, Enhong Chen. Learning Recommender Systems with Implicit Feedback via Soft Target Enhancement. *ACM SIGIR 2021*: 575–584.
- [62] Linan Yue, Qi Liu*, Han Wu, Kai Zhang, Yanqing An, **Mingyue Cheng**, Biao Yin, Dayong Wu. NeurJudge: A Circumstance-aware Neural Framework for Legal Judgment Prediction. *ACM SIGIR 2021*: 973–982.
- [63] Yanqing An, Qi Liu*, Han Wu, Kai Zhang, Linan Yue, **Mingyue Cheng**, Hongke Zhao, Senchao Yuan, Enhong Chen. LawyerPAN: A Proficiency Assessment Network for Trial Lawyers. *ACM SIGKDD 2021*: 5–13.
- [64] **Mingyue Cheng**, Runlong Yu, Qi Liu*, Hongke Zhao, Hefu Zhang, Enhong Chen. Alpha-Beta Sampling for Pairwise Ranking in One-Class Collaborative Filtering. *IEEE ICDM 2019*: 1000–1005.
- [65] **Mingyue Cheng**, Qi Liu*, Zhi Li, Runlong Yu, Weibo Gao, Enhong Chen. Multi-pair Bayesian personalized ranking. *Journal of Nanjing University of Information Science and Technology (Natural Science Edition)*, 2019, 11(3): 302–308. (In Chinese).

Preprints

- [66] **Mingyue Cheng**, Xiaoyu Tao, Qi Liu, Ze Guo, Enhong Chen. Position: Beyond Model-Centric Prediction — Agentic Time Series Forecasting. (Preprint).
- [67] Xiaoyu Tao, **Mingyue Cheng**, Bokai Pan, Chuang Jiang, Huanjian Zhang, Tian Gao, Yaguo Liu, Qi Liu, Enhong Chen. CastFSR: A Fast–Slow–Reflect Agentic Reasoning Framework for Context-Aware Time Series Forecasting. (Preprint).
- [68] Bokai Pan, **Mingyue Cheng***, Zhiding Liu, Shuo Yu, Xiaoyu Tao, Yuchong Wu, Qi Liu, Defu Lian, Enhong Chen. CastFlow: Learning Role-Specialized Agentic Workflows for Time Series Forecasting. (Preprint). [Code]
- [69] Xiaoyu Tao, **Mingyue Cheng**, Chuang Jiang, Tian Gao, Huanjian Zhang, Yaguo Liu, Qi Liu. Cast-R1: Learning Tool-Augmented Sequential Decision Policies for Time Series Forecasting. (Preprint). [Code]

- [70] Daoyu Wang, **Mingyue Cheng**^{*}, Shuo Yu, Zirui Liu, Ze Guo, Xin Li, Qi Liu. PaperArena: An Evaluation Benchmark for Tool-Augmented Agentic Reasoning on Scientific Literature. (Preprint). [Code]
- [71] Daoyu Wang, Qingchuan Li, **Mingyue Cheng**, Jie Ouyang, Shuo Yu, Qi Liu, Enhong Chen. StepPO: Step-Aligned Policy Optimization for Agentic Reinforcement Learning. (Preprint).
- [72] **Mingyue Cheng**, Daoyu Wang, Shuo Yu, Qingchuan Li, Jie Ouyang, Yucong Luo, Yiju Zhang, Qi Liu^{*}, Enhong Chen. A Comprehensive Survey of the LLM-Based Agent: The Contextual Cognition Perspective. (Preprint).

Research Grants

Chinese Academy of Sciences

Jul. 2026 – Jun. 2029

Strategic Priority Research Program for Basic and Interdisciplinary Frontier Research (Category B). *Mechanisms and Methods for Autonomous Interactive Learning in Large Models*.

Role: Project Lead.

National Science and Technology Major Project

Aug. 2026 – Jul. 2028

New-Generation Artificial Intelligence. *Scientific Data Governance Toolchain and Datasets — Chemistry*.

Role: Core Project Member.

National Natural Science Foundation of China

Jan. 2026 – Dec. 2028

Young Scientists Fund (Category C). *Cross-Domain Context-Aware Time Series Representation Learning and Forecasting*.

Role: Project Lead.

USTC Youth Innovation Fund

Jan. 2027 – Dec. 2028

Multi-Turn Interactive Learning and Continual Evolution for Large-Model Agents: Methods and Applications.

Role: Project Lead. *Scheduled to start in January 2027*.

USTC New Medicine Joint Fund

Jan. 2025 – Dec. 2026

Cultivation Project, Double First-Class Discipline Development Special Program. *Time Series Modeling Methods and Applications Using Perioperative Physiological Data*.

Role: Lead for the participating project team.

Anhui Provincial Natural Science Foundation

Sep. 2024 – Aug. 2026

Table Semantic Understanding and Reasoning for Scientific Literature.

Role: Project Lead.

Additional industry research support: iFLYTEK, Huawei, Tencent and Kuaishou.

Selected Open Projects & Research Systems

- **Agent-R1:** A unified, modular framework for multi-turn agentic reinforcement learning.
- **Claw-R1:** Data infrastructure for collecting, evaluating and curating agent-interaction trajectories.
- **CastClaw:** Human-in-the-loop agents for time-series forecasting research.
- **PaperScout:** Autonomous scientific literature retrieval with process-aware policy optimization.
- **Academic Search:** Multi-source scholarly retrieval, metadata validation, deduplication and BibTeX export.
- **SciToken applications:** Scientific literature discovery; academic writing assistance, including polishing, proofreading and translation.

Academic Service

Conference and journal reviewing

Conference service. KDD (2023–2027); **TheWebConf (2024–2027; Area Chair, 2027)**; WSDM (2025, 2027); CIKM (2024, 2025); ICDM; ICML (2025, 2026); **ICLR (2025, 2027; Area Chair, 2027)**; NeurIPS (2024–2026); ACL (2025, 2026); EMNLP; AAAI (2026, 2027); SIGSPATIAL (2026); IJCAI (2024–2026; Senior Program Committee, 2026); SDM (2024); DASFAA (2024, 2025).

Entries for 2027 are forthcoming appointments.

Journal reviewer. IEEE TKDE, TPAMI, TNNLS, TII and Transactions on Audio, Speech and Language Processing; ACM TKDD and TIST; Transactions on Machine Learning Research; Neurocomputing; Frontiers of Computer Science; Science China Information Sciences; Journal of Software; Chinese Journal of Computers.

Academic organizations

- **Executive Committee Member**, Technical Committee on Artificial Intelligence and Pattern Recognition, China Computer Federation.
- **Corresponding Member**, Information Retrieval Technical Committee, Chinese Information Processing Society of China.
- IEEE Task Force on Data-Efficient Agentic Learning (DEAL).
- IEEE Task Force on AI for Time Series and Spatio-Temporal Data.

Conference organization and tutorials

Publication Chair, IEEE International Conference on e-Business Engineering (ICEBE), 2026.

Tutorial organizer and speaker, *Context-Aware Time Series Forecasting: From Pattern Extrapolation to Cognitive Reasoning*, IEEE ICDM 2026 Industry Tutorial Session. *Accepted; forthcoming*.

Selected Honors & Awards

- **2025** — Hongzhuang Young Talent Program, USTC.
- **2025** — Best of WSDM recognition for *InstrucTime*.
- **2024** — Gold Award, National Finals of the Ascend AI Innovation Competition (*faculty advisor*).
- **2024** — Second Place in Tasks 2 and 3, KDD Cup 2024.
- **2023** — National Silver Award, China International College Students' Innovation Competition.
- **2023** — Outstanding Graduate, USTC.
- **2021** — National Scholarship for Doctoral Students, Ministry of Education of China.

Teaching

Introduction to Data Science, undergraduate course, USTC. Spring 2024, 2025 and 2026.

Introduction to Systems Programming, undergraduate course, USTC. Spring 2026.